

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 15:23:06 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 1952 TO ITERATE

100.0% PROCESSED 1952 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

=> file marpat

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

148.15

148.36

FILE 'MARPAT' ENTERED AT 15:23:15 ON 17 NOV 2003

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FILE CONTENT: 1988-PRESENT (VOL 104 ISS 15-VOL 139 ISS20) (20031114ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US 6632961 14 OCT 2003

DE 10232663 16 OCT 2003

EP 1354869 22 OCT 2003

JP 2003300880 21 OCT 2003

WO 2003087212 23 OCT 2003

Structure search limits have been raised. See HELP SLIMIT for the new, higher limits.

=> s l1 sss full

FULL SEARCH INITIATED 15:23:25 FILE 'MARPAT'

FULL SCREEN SEARCH COMPLETED - 431 TO ITERATE

100.0% PROCESSED 431 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.07

L4 0 SEA SSS FUL L1

=> file caold

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

104.55

252.91

FILE 'CAOLD' ENTERED AT 15:23:47 ON 17 NOV 2003

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FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> s ll sss full

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 15:23:54 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 1952 TO ITERATE

100.0% PROCESSED 1952 ITERATIONS
SEARCH TIME: 00.00.01

2 ANSWERS

L5 2 SEA SSS FUL L1

L6 0 L5

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.40	401.86

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 15:24:08 ON 17 NOV 2003
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FILE COVERS 1907 - 17 Nov 2003 VOL 139 ISS 21
FILE LAST UPDATED: 16 Nov 2003 (20031116/ED)

This file contains CAS Registry Numbers for easy and accurate

substance identification.

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(FILE 'HOME' ENTERED AT 15:22:22 ON 17 NOV 2003)

FILE 'REGISTRY' ENTERED AT 15:22:35 ON 17 NOV 2003

L1 STRUCTURE UPLOADED
L2 0 S L1
L3 2 S L1 SSS FULL

FILE 'MARPAT' ENTERED AT 15:23:15 ON 17 NOV 2003

L4 0 S L1 SSS FULL

FILE 'CAOLD' ENTERED AT 15:23:47 ON 17 NOV 2003
S L1

FILE 'REGISTRY' ENTERED AT 15:23:53 ON 17 NOV 2003

L5 2 S L1 SSS FULL

FILE 'CAOLD' ENTERED AT 15:23:55 ON 17 NOV 2003

L6 0 S L5 SSS FULL

FILE 'CAPLUS' ENTERED AT 15:24:08 ON 17 NOV 2003

=> s 13

L7 1 L3

=> s 15

L8 1 L5

=> s 17 and 18

L9 1 L7 AND L8

=> d 17 fbib hitstr abs total

L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN

AN 2001:31501 CAPLUS

DN 134:100887

TI Preparation of tricyclic compounds having spiro-piperidine as inhibitors
of blood coagulation factor X (FXa) and anticoagulants

IN Nishida, Hidemitsu; Saitoh, Fumihiko; Harada, Kousuke; Shiromizu, Ikuya

PA Mochida Pharmaceutical Co., Ltd., Japan

SO PCT Int. Appl., 305 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001002397	A1	20010111	WO 2000-JP4374	20000630
	W:				
	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,				
	CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,				
	IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,				
	MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,				
	SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,				
	AZ, BY, KG, KZ, MD, RU, TJ, TM				

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

JP 1999-222883 A 19990630
 EP 1191028 A1 20020327 EP 2000-940912 20000630
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 1999-222883 A 19990630
 WO 2000-JP4374 W 20000630
 BR 2000012093 A 20020716 BR 2000-12093 20000630
 JP 1999-222883 A 19990630
 WO 2000-JP4374 W 20000630
 ZA 2001010558 A 20020912 ZA 2001-10558 20011221
 JP 1999-222883 A 19990630
 US 2003045520 A1 20030306 US 2001-26606 20011227
 JP 1999-222883 A 19990630
 WO 2000-JP4374 A220000630
 JP 2000-399998 A 20001228
 NO 2001006402 A 20020227 NO 2001-6402 20011228
 JP 1999-222883 A 19990630
 WO 2000-JP4374 W 20000630

PATENT FAMILY INFORMATION:

FAN 2002:521746

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002053568	A1	20020711	WO 2001-JP11656	20011228
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG JP 2000-399998 A 20001228 EP 1346994 A1 20030924 EP 2001-272922 20011228 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR JP 2000-399998 A 20001228 WO 2001-JP11656W 20011228				

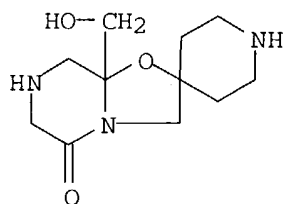
OS MARPAT 134:100887

IT **318988-48-6P**, 1,4-Diaza-6-(hydroxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonane-8,4'-piperidine]-2-one **318988-58-8P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

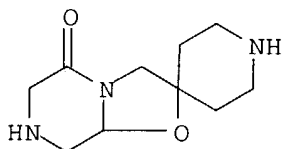
(prepn. of tricyclic compds. having spiro-piperidine as inhibitors of blood coagulation factor X (FXa) and anticoagulants or as pharmacophores in mol. designing Fxa inhibitors)

RN 318988-48-6 CAPLUS

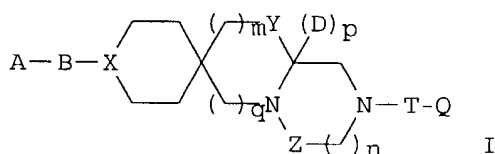
CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro-8a-(hydroxymethyl)- (9CI) (CA INDEX NAME)



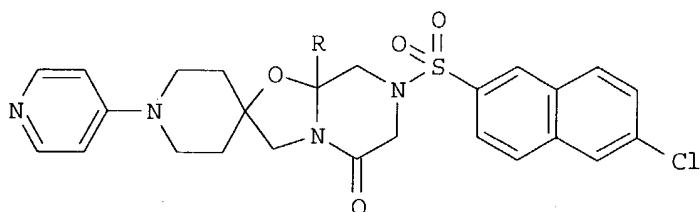
RN 318988-58-8 CAPLUS

CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro-
(9CI) (CA INDEX NAME)

GI



I



II

AB Arom. compds. having cyclic amino which are represented by general formula (I) or salts thereof [wherein A = H, (un)substituted (un)satd. 5- to 6-membered cyclic hydrocarbyl or heterocyclyl, (un)substituted NH₂, (un)substituted imidoyl; B = single bond, CO, SO, (un)substituted C1-2 alkylene; D = H, (un)substituted CHO, (un)substituted C1-6 alkyl; X = N, (un)substituted methine; Y = O, S(O)_y (wherein y = 0,1,2), (un)substituted NH; Z = CH₂, CO, C(S); T = S(O)_z (wherein z = 0,1,2), CO, (un)substituted C1-2 alkylene; Q = (un)substituted hydrocarbyl or heterocyclyl; m, n, q = 0, 1,2; p = 0,1; the three rings contg. X, Y, or Z is optionally substituted; the bond represented by a dotted and solid line in the ring contg. Z is a single bond or a double bond when p = 0] are prepd. These compds. are useful as drugs, in particular, activated blood coagulation factor X inhibitors for the prevention and treatment of diseases caused by thrombus or embolism, influenza virus infection, or periodontosis, exert a potent anticoagulation effect, and can be orally administered. A

pharmacophore derived from the above compds. is also useful in mol. designing Fxa inhibitors. Thus, 4-(aminomethyl)-1-benzyl-4-hydroxypiperidine was cyclocondensed with Et 2-[N-(3-acetoxy-2-oxopropan-1-yl)-N-(6-chloronaphthalene-2-ylsulfonyl)amino]acetate under reflux in the presence of p-MeC6H4SO3H.H2O using a Dean-Stark trap to give 6-acetoxy-1,4-diaza-1'-benzyl-4-(6-chloronaphthalene-2-ylsulfonyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one which underwent sapon. with a mixt. of aq. NaOH and MeOH, methylation by di-Me sulfate, and debenzylation with 1-chloroethyl chloroformate to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one hydrochloride. The latter compd. was condensed with 4-chloropyridine hydrochloride in the presence of diisopropylethylamine in 2-ethoxyethanol under reflux for 2 h to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxo-1'-(4-pyridyl)-spiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one (II; R = CH2OMe). II (R = CH2OMe) and II (R = CO2Et) showed IC50 of 0.0032 and 0.0015 .mu.M, resp., against Fxa.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 15:22:22 ON 17 NOV 2003)

FILE 'REGISTRY' ENTERED AT 15:22:35 ON 17 NOV 2003

L1 STRUCTURE UPLOADED

L2 0 S L1

L3 2 S L1 SSS FULL

FILE 'MARPAT' ENTERED AT 15:23:15 ON 17 NOV 2003

L4 0 S L1 SSS FULL

FILE 'CAOLD' ENTERED AT 15:23:47 ON 17 NOV 2003

S L1

FILE 'REGISTRY' ENTERED AT 15:23:53 ON 17 NOV 2003

L5 2 S L1 SSS FULL

FILE 'CAOLD' ENTERED AT 15:23:55 ON 17 NOV 2003

L6 0 S L5 SSS FULL

FILE 'CAPLUS' ENTERED AT 15:24:08 ON 17 NOV 2003

L7 1 S L3

L8 1 S L5

L9 1 S L7 AND L8

=> d l8 fbib hitstr abs total

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN

AN 2001:31501 CAPLUS

DN 134:100887

TI Preparation of tricyclic compounds having spiro-piperidine as inhibitors of blood coagulation factor X (FXa) and anticoagulants

IN Nishida, Hidemitsu; Saitoh, Fumihiko; Harada, Kousuke; Shiromizu, Ikuya

PA Mochida Pharmaceutical Co., Ltd., Japan

SO PCT Int. Appl., 305 pp.

CODEN: PIXXD2

DT Patent
LA Japanese
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001002397	A1	20010111	WO 2000-JP4374	20000630
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1191028	A1	20020327	JP 1999-222883 A	19990630
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000012093	A	20020716	EP 2000-940912	20000630
JP 1999-222883 A 19990630				
ZA 2001010558	A	20020912	WO 2000-JP4374 W	20000630
US 2003045520	A1	20030306	BR 2000-12093	20000630
JP 1999-222883 A 19990630				
NO 2001006402	A	20020227	JP 1999-222883 A	19990630
WO 2000-JP4374 A220000630				
JP 2000-399998 A 20001228				
NO 2001-6402 20011228				
JP 1999-222883 A 19990630				
WO 2000-JP4374 W.20000630				

PATENT FAMILY INFORMATION:

FAN 2002:521746

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002053568	A1	20020711	WO 2001-JP11656	20011228
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
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WO 2001-JP11656W 20011228				

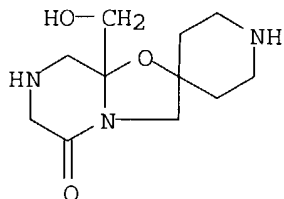
OS MARPAT 134:100887

IT **318988-48-6P**, 1,4-Diaza-6-(hydroxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonane-8,4'-piperidine]-2-one **318988-58-8P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of tricyclic compds. having spiro-piperidine as inhibitors of blood coagulation factor X (FXa) and anticoagulants or as pharmacophores in mol. designing Fxa inhibitors)

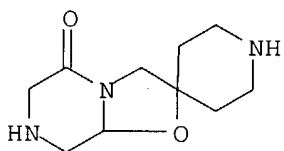
RN 318988-48-6 CAPLUS

CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro-8a-(hydroxymethyl)- (9CI) (CA INDEX NAME)

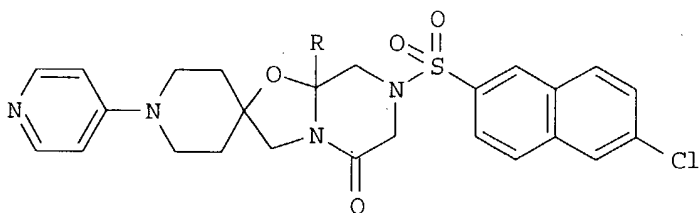
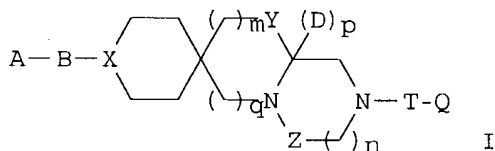


RN 318988-58-8 CAPLUS

CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro- (9CI) (CA INDEX NAME)



GI



II

AB Arom. compds. having cyclic amino which are represented by general formula (I) or salts thereof [wherein A = H, (un)substituted (un)satd. 5- to 6-membered cyclic hydrocarbonyl or heterocyclyl, (un)substituted NH₂, (un)substituted imidoyl; B = single bond, CO, SO, (un)substituted C1-2 alkylene; D = H, (un)substituted CHO, (un)substituted C1-6 alkyl; X = N, (un)substituted methine; Y = O, S(O)_y (wherein y = 0,1,2), (un)substituted NH; Z = CH₂, CO, C(S); T = S(O)_z (wherein z = 0,1,2), CO, (un)substituted

C1-2 alkylene; Q = (un)substituted hydrocarbonyl or heterocyclyl; m, n, q = 0, 1, 2; p = 0, 1; the three rings contg. X, Y, or Z is optionally substituted; the bond represented by a dotted and solid line in the ring contg. Z is a single bond or a double bond when p = 0] are prepd. These compds. are useful as drugs, in particular, activated blood coagulation factor X inhibitors for the prevention and treatment of diseases caused by thrombus or embolism, influenza virus infection, or periodontosis, exert a potent anticoagulation effect, and can be orally administered. A pharmacophore derived from the above compds. is also useful in mol. designing Fxa inhibitors. Thus, 4-(aminomethyl)-1-benzyl-4-hydroxypiperidine was cyclocondensed with Et 2-[N-(3-acetoxy-2-oxopropan-1-yl)-N-(6-chloronaphthalene-2-ylsulfonyl)amino]acetate under reflux in the presence of p-MeC6H4SO3H.H2O using a Dean-Stark trap to give 6-acetoxy-1,4-diaza-1'-benzyl-4-(6-chloronaphthalene-2-ylsulfonyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one which underwent sapon. with a mixt. of aq. NaOH and MeOH, methylation by di-Me sulfate, and debenzylation with 1-chloroethyl chloroformate to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one hydrochloride. The latter compd. was condensed with 4-chloropyridine hydrochloride in the presence of diisopropylethylamine in 2-ethoxyethanol under reflux for 2 h to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxo-1'-(4-pyridyl)-spiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one (II; R = CH2OMe). II (R = CH2OMe) and II (R = CO2Et) showed IC50 of 0.0032 and 0.0015 .mu.M, resp., against Fxa.

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L4 0 S L1 SSS FULL

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S L1

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L5 2 S L1 SSS FULL

FILE 'CAOLD' ENTERED AT 15:23:55 ON 17 NOV 2003

L6 0 S L5 SSS FULL

FILE 'CAPLUS' ENTERED AT 15:24:08 ON 17 NOV 2003

L7 1 S L3
L8 1 S L5
L9 1 S L7 AND L8

=> s 19 and FXa receptor

L10 0 L9 AND FXA RECEPTOR

=> s l9 and FX

L11 0 L9 AND FX

=> s l9 and FXa and coagulation

L12 1 L9 AND FXA AND COAGULATION

=> d l12 fbib hitstr abs total

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN

AN 2001:31501 CAPLUS

DN 134:100887

TI Preparation of tricyclic compounds having spiro-piperidine as inhibitors of blood **coagulation** factor X (**FXa**) and anticoagulants

IN Nishida, Hidemitsu; Saitoh, Fumihiko; Harada, Kousuke; Shiromizu, Ikuya

PA Mochida Pharmaceutical Co., Ltd., Japan

SO PCT Int. Appl., 305 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001002397	A1	20010111	WO 2000-JP4374	20000630
W:			AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
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			JP 1999-222883 A	19990630
EP 1191028	A1	20020327	EP 2000-940912	20000630
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			JP 1999-222883 A	19990630
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US 2003045520	A1	20030306	US 2001-26606	20011227
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			JP 2000-399998 A	20001228
NO 2001006402	A	20020227	NO 2001-6402	20011228
			JP 1999-222883 A	19990630
			WO 2000-JP4374 W	20000630

PATENT FAMILY INFORMATION:

FAN 2002:521746

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002053568	A1	20020711	WO 2001-JP11656	20011228
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LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
 PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
 US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1346994 A1 20030924 JP 2000-399998 A 20001228
 EP 2001-272922 20011228
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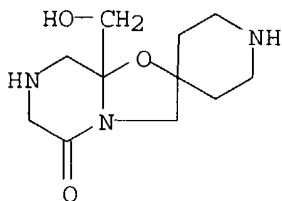
OS MARPAT 134:100887

IT **318988-48-6P**, 1,4-Diaza-6-(hydroxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonane-8,4'-piperidine]-2-one **318988-58-8P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of tricyclic compds. having spiro-piperidine as inhibitors of blood **coagulation** factor X (**Fxa**) and anticoagulants or as pharmacophores in mol. designing **Fxa** inhibitors)

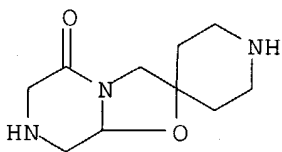
RN 318988-48-6 CAPLUS

CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro-8a-(hydroxymethyl)- (9CI) (CA INDEX NAME)

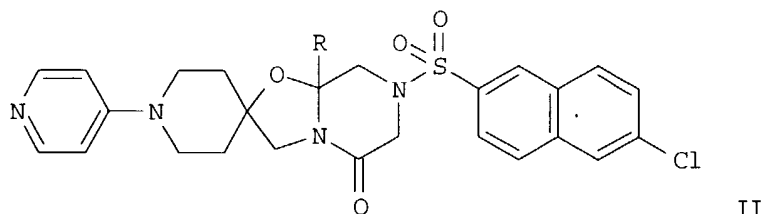
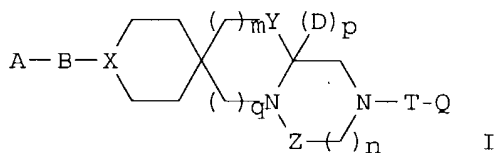


RN 318988-58-8 CAPLUS

CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro- (9CI) (CA INDEX NAME)



GI



AB Arom. compds. having cyclic amino which are represented by general formula (I) or salts thereof [wherein A = H, (un)substituted (un)satd. 5- to 6-membered cyclic hydrocarbyl or heterocyclyl, (un)substituted NH₂, (un)substituted imidoyl; B = single bond, CO, SO, (un)substituted C1-2 alkylene; D = H, (un)substituted CHO, (un)substituted C1-6 alkyl; X = N, (un)substituted methine; Y = O, S(O)_y (wherein y = 0,1,2), (un)substituted NH; Z = CH₂, CO, C(S); T = S(O)z (wherein z = 0,1,2), CO, (un)substituted C1-2 alkylene; Q = (un)substituted hydrocarbyl or heterocyclyl; m, n, q = 0, 1,2; p = 0,1; the three rings contg. X, Y, or Z is optionally substituted; the bond represented by a dotted and solid line in the ring contg. Z is a single bond or a double bond when p = 0] are prepd. These compds. are useful as drugs, in particular, activated blood **coagulation** factor X inhibitors for the prevention and treatment of diseases caused by thrombus or embolism, influenza virus infection, or periodontosis, exert a potent anticoagulation effect, and can be orally administered. A pharmacophore derived from the above compds. is also useful in mol. designing **Fxa** inhibitors. Thus, 4-(aminomethyl)-1-benzyl-4-hydroxypiperidine was cyclocondensed with Et 2-[N-(3-acetoxy-2-oxopropan-1-yl)-N-(6-chloronaphthalene-2-ylsulfonyl)amino]acetate under reflux in the presence of p-MeC₆H₄SO₃H.H₂O using a Dean-Stark trap to give 6-acetoxy-1,4-diaza-1'-benzyl-4-(6-chloronaphthalene-2-ylsulfonyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one which underwent sapon. with a mixt. of aq. NaOH and MeOH, methylation by di-Me sulfate, and debenzylation with 1-chloroethyl chloroformate to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one hydrochloride. The latter compd. was condensed with 4-chloropyridine hydrochloride in the presence of diisopropylethylamine in 2-ethoxyethanol under reflux for 2 h to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxo-1'-(4-pyridyl)-spiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one (II; R = CH₂OMe). II (R = CH₂OMe) and II (R = CO₂Et) showed IC₅₀ of 0.0032 and 0.0015 .mu.M, resp., against **Fxa**.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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COST IN U.S. DOLLARS

SINCE FILE TOTAL

Patel

<11/18/2003>

10026606.2

Page 15

FULL ESTIMATED COST	ENTRY 42.42	SESSION 444.28
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
CA SUBSCRIBER PRICE	ENTRY -1.95	SESSION -1.95

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NEWS 8 AUG 18 FROSTI and KOSMET enhanced with Simultaneous Left and Right
Truncation
NEWS 9 AUG 18 Simultaneous left and right truncation added to ANABSTR
NEWS 10 SEP 22 DIPPR file reloaded
NEWS 11 SEP 25 INPADOC: Legal Status data to be reloaded
NEWS 12 SEP 29 DISSABS now available on STN
NEWS 13 OCT 10 PCTFULL: Two new display fields added
NEWS 14 OCT 21 BIOSIS file reloaded and enhanced
NEWS 15 OCT 28 BIOSIS file segment of TOXCENTER reloaded and enhanced

NEWS EXPRESS NOVEMBER 14 CURRENT WINDOWS VERSION IS V6.01c, CURRENT
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
NEWS HOURS STN Operating Hours Plus Help Desk Availability
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FILE 'HOME' ENTERED AT 15:07:30 ON 17 NOV 2003

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

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0.21

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<11/18/2003>

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provided by InfoChem.

STRUCTURE FILE UPDATES: 16 NOV 2003 HIGHEST RN 617673-49-1
DICTIONARY FILE UPDATES: 16 NOV 2003 HIGHEST RN 617673-49-1

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

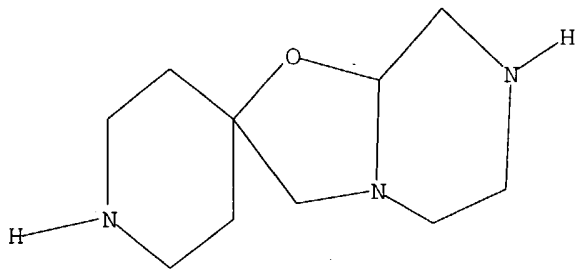
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>
Uploading 10026606.1

L1 STRUCTURE UPLOADED

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L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED - 21 TO ITERATE

100.0% PROCESSED 21 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 146 TO 694

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 sss full

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FULL SCREEN SEARCH COMPLETED - 522 TO ITERATE

100.0% PROCESSED 522 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

=> file marpat

COST IN U.S. DOLLARS

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ENTRY

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148.15

148.36

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FILE CONTENT: 1988-PRESENT (VOL 104 ISS 15-VOL 139 ISS20) (20031114ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US 6632961 14 OCT 2003

DE 10232663 16 OCT 2003

EP 1354869 22 OCT 2003

JP 2003300880 21 OCT 2003

WO 2003087212 23 OCT 2003

Structure search limits have been raised. See HELP SLIMIT for the new,
higher limits.

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0 ANSWERS

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PROJECTED ANSWERS: 0 TO 0

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100.0% PROCESSED 51 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

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COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

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FULL ESTIMATED COST

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FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> s l1 sss full

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures..

FULL SEARCH INITIATED 15:08:54 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 522 TO ITERATE

100.0% PROCESSED 522 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

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L7 0 L6

=> file CAREACT

'CAREACT' IS NOT A VALID FILE NAME

SESSION CONTINUES IN FILE 'CAOLD'

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=> d his

(FILE 'HOME' ENTERED AT 15:07:30 ON 17 NOV 2003)

FILE 'REGISTRY' ENTERED AT 15:07:43 ON 17 NOV 2003

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FILE 'MARPAT' ENTERED AT 15:08:15 ON 17 NOV 2003

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L5 0 S L1 SSS FULL

FILE 'CAOLD' ENTERED AT 15:08:44 ON 17 NOV 2003
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FILE 'REGISTRY' ENTERED AT 15:08:54 ON 17 NOV 2003

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COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

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FULL ESTIMATED COST

0.40

401.86

FILE 'CAPLUS' ENTERED AT 15:09:41 ON 17 NOV 2003

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FILE COVERS 1907 - 17 Nov 2003 VOL 139 ISS 21

FILE LAST UPDATED: 16 Nov 2003 (20031116/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> s 16

L9 1 L6

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L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN

AN 2001:31501 CAPLUS

DN 134:100887

TI Preparation of tricyclic compounds having spiro-piperidine as inhibitors of blood coagulation factor X (FXa) and anticoagulants
 IN Nishida, Hidemitsu; Saitoh, Fumihiko; Harada, Kousuke; Shiromizu, Ikuya
 PA Mochida Pharmaceutical Co., Ltd., Japan
 SO PCT Int. Appl., 305 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
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			WO 2000-JP4374 W	20000630		

PATENT FAMILY INFORMATION:

FAN 2002:521746

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EP 1346994	A1	20030924	EP 2001-272922	20011228		
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OS MARPAT 134:100887

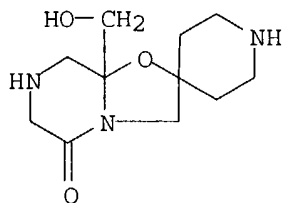
IT **318988-48-6P**, 1,4-Diaza-6-(hydroxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonane-8,4'-piperidine]-2-one **318988-58-8P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of tricyclic compds. having spiro-piperidine as inhibitors of blood coagulation factor X (FXa) and anticoagulants or as pharmacophores in mol. designing Fxa inhibitors)

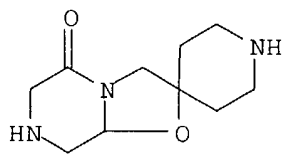
RN 318988-48-6 CAPLUS

CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro-8a-(hydroxymethyl)- (9CI) (CA INDEX NAME)

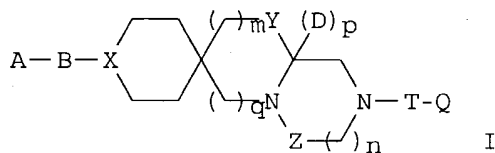


RN 318988-58-8 CAPLUS

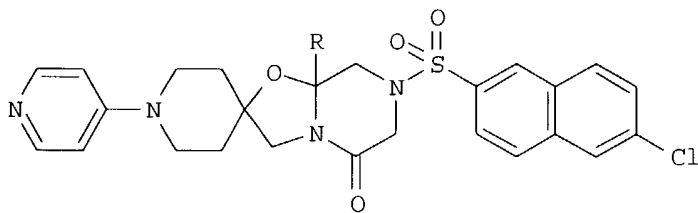
CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro- (9CI) (CA INDEX NAME)



GI



I



II

AB Arom. compds. having cyclic amino which are represented by general formula

(I) or salts thereof [wherein A = H, (un)substituted (un)satd. 5- to 6-membered cyclic hydrocarbyl or heterocyclyl, (un)substituted NH₂, (un)substituted imidoyl; B = single bond, CO, SO, (un)substituted C1-2 alkylene; D = H, (un)substituted CHO, (un)substituted C1-6 alkyl; X = N, (un)substituted methine; Y = O, S(O)_y (wherein y = 0,1,2), (un)substituted NH; Z = CH₂, CO, C(S); T = S(O)_z (wherein z = 0,1,2), CO, (un)substituted C1-2 alkylene; Q = (un)substituted hydrocarbyl or heterocyclyl; m, n, q = 0, 1,2; p = 0,1; the three rings contg. X, Y, or Z is optionally substituted; the bond represented by a dotted and solid line in the ring contg. Z is a single bond or a double bond when p = 0] are prepd. These compds. are useful as drugs, in particular, activated blood coagulation factor X inhibitors for the prevention and treatment of diseases caused by thrombus or embolism, influenza virus infection, or periodontosis, exert a potent anticoagulation effect, and can be orally administered. A pharmacophore derived from the above compds. is also useful in mol. designing Fxa inhibitors. Thus, 4-(aminomethyl)-1-benzyl-4-hydroxypiperidine was cyclocondensed with Et 2-[N-(3-acetoxy-2-oxopropan-1-yl)-N-(6-chloronaphthalene-2-ylsulfonyl)amino]acetate under reflux in the presence of p-MeC₆H₄SO₃H.H₂O using a Dean-Stark trap to give 6-acetoxy-1,4-diaza-1'-benzyl-4-(6-chloronaphthalene-2-ylsulfonyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one which underwent sapon. with a mixt. of aq. NaOH and MeOH, methylation by di-Me sulfate, and debenzylation with 1-chloroethyl chloroformate to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one hydrochloride. The latter compd. was condensed with 4-chloropyridine hydrochloride in the presence of diisopropylethylamine in 2-ethoxyethanol under reflux for 2 h to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxo-1'-(4-pyridyl)-spiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one (II; R = CH₂OMe). II (R = CH₂OMe) and II (R = CO₂Et) showed IC₅₀ of 0.0032 and 0.0015 .mu.M, resp., against Fxa.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 19 fbib hitstr abs total

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:31501 CAPLUS
DN 134:100887
TI Preparation of tricyclic compounds having spiro-piperidine as inhibitors of blood coagulation factor X (FXa) and anticoagulants
IN Nishida, Hidemitsu; Saitoh, Fumihiko; Harada, Kousuke; Shiromizu, Ikuya
PA Mochida Pharmaceutical Co., Ltd., Japan
SO PCT Int. Appl., 305 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001002397	A1	20010111	WO 2000-JP4374	20000630
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

JP 1999-222883 A 19990630

EP 1191028 A1 20020327 EP 2000-940912 20000630

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 1999-222883 A 19990630

WO 2000-JP4374 W 20000630

BR 2000012093 A 20020716 BR 2000-12093 20000630

JP 1999-222883 A 19990630

WO 2000-JP4374 W 20000630

ZA 2001010558 A 20020912 ZA 2001-10558 20011221

JP 1999-222883 A 19990630

US 2003045520 A1 20030306 US 2001-26606 20011227

JP 1999-222883 A 19990630

WO 2000-JP4374 A220000630

JP 2000-399998 A 20001228

NO 2001006402 A 20020227 NO 2001-6402 20011228

JP 1999-222883 A 19990630

WO 2000-JP4374 W 20000630

PATENT FAMILY INFORMATION:

FAN 2002:521746

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053568	A1	20020711	WO 2001-JP11656	20011228
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG JP 2000-399998 A 20001228 EP 1346994 A1 20030924 EP 2001-272922 20011228 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR JP 2000-399998 A 20001228 WO 2001-JP11656W 20011228				

OS MARPAT 134:100887

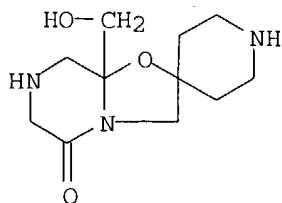
IT **318988-48-6P**, 1,4-Diaza-6-(hydroxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonane-8,4'-piperidine]-2-one **318988-58-8P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

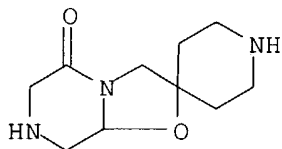
(prepn. of tricyclic compds. having spiro-piperidine as inhibitors of blood coagulation factor X (FXa) and anticoagulants or as pharmacophores in mol. designing Fxa inhibitors)

RN 318988-48-6 CAPLUS

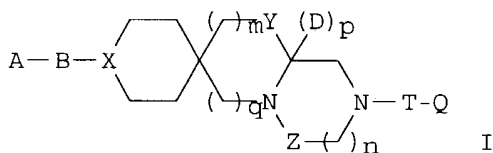
CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro-8a-(hydroxymethyl)- (9CI) (CA INDEX NAME)



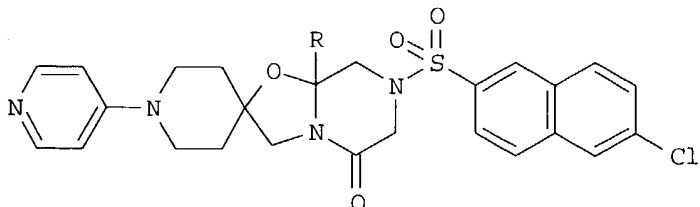
RN 318988-58-8 CAPLUS

CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro-
(9CI) (CA INDEX NAME)

GI



I



II

AB Arom. compds. having cyclic amino which are represented by general formula (I) or salts thereof [wherein A = H, (un)substituted (un)satd. 5- to 6-membered cyclic hydrocarbyl or heterocyclyl, (un)substituted NH₂, (un)substituted imidoyl; B = single bond, CO, SO, (un)substituted C1-2 alkylene; D = H, (un)substituted CHO, (un)substituted C1-6 alkyl; X = N, (un)substituted methine; Y = O, S(O)_y (wherein y = 0,1,2), (un)substituted NH; Z = CH₂, CO, C(S); T = S(O)_z (wherein z = 0,1,2), CO, (un)substituted C1-2 alkylene; Q = (un)substituted hydrocarbyl or heterocyclyl; m, n, q = 0, 1,2; p = 0,1; the three rings contg. X, Y, or Z is optionally substituted; the bond represented by a dotted and solid line in the ring contg. Z is a single bond or a double bond when p = 0] are prepd. These compds. are useful as drugs, in particular, activated blood coagulation factor X inhibitors for the prevention and treatment of diseases caused by thrombus or embolism, influenza virus infection, or periodontosis, exert a potent anticoagulation effect, and can be orally administered. A

pharmacophore derived from the above compds. is also useful in mol. designing Fxa inhibitors. Thus, 4-(aminomethyl)-1-benzyl-4-hydroxypiperidine was cyclocondensed with Et 2-[N-(3-acetoxy-2-oxopropan-1-yl)-N-(6-chloronaphthalene-2-ylsulfonyl)amino]acetate under reflux in the presence of p-MeC6H4SO3H.H2O using a Dean-Stark trap to give 6-acetoxy-1,4-diaza-1'-benzyl-4-(6-chloronaphthalene-2-ylsulfonyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one which underwent sapon. with a mixt. of aq. NaOH and MeOH, methylation by di-Me sulfate, and debenzylation with 1-chloroethyl chloroformate to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one hydrochloride. The latter compd. was condensed with 4-chloropyridine hydrochloride in the presence of diisopropylethylamine in 2-ethoxyethanol under reflux for 2 h to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxo-1'-(4-pyridyl)-spiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one (II; R = CH2OMe). II (R = CH2OMe) and II (R = CO2Et) showed IC50 of 0.0032 and 0.0015 .mu.M, resp., against Fxa.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 15:07:30 ON 17 NOV 2003)

FILE 'REGISTRY' ENTERED AT 15:07:43 ON 17 NOV 2003

L1 STRUCTURE UPLOADED
 L2 0 S L1
 L3 2 S L1 SSS FULL

FILE 'MARPAT' ENTERED AT 15:08:15 ON 17 NOV 2003

L4 0 S L1
 L5 0 S L1 SSS FULL

FILE 'CAOLD' ENTERED AT 15:08:44 ON 17 NOV 2003
 S L1

FILE 'REGISTRY' ENTERED AT 15:08:54 ON 17 NOV 2003

L6 2 S L1 SSS FULL

FILE 'CAOLD' ENTERED AT 15:08:54 ON 17 NOV 2003

L7 0 S L6 SSS FULL

FILE 'CAPLUS' ENTERED AT 15:09:41 ON 17 NOV 2003

L8 1 S L3
 L9 1 S L6

=> s 18 and 119 and pyrimidine

L10 0 L8 AND LL9 AND PYRIMIDINE

=> s 18 and 19 and imidazole

L11 0 L8 AND L9 AND IMIDAZOLE

=> s 18 and 19 and imidazolidine

L12 0 L8 AND L9 AND IMIDAZOLIDINE

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

Patel

<11/18/2003>

10026606.1

Page 12

FULL ESTIMATED COST	ENTRY 30.95	SESSION 432.81
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
CA SUBSCRIBER PRICE	ENTRY -1.30	SESSION -1.30

STN INTERNATIONAL LOGOFF AT 15:13:58 ON 17 NOV 2003

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LOGINID:sssptal611sxp

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 7 AUG 18 Simultaneous left and right truncation added to PASCAL
NEWS 8 AUG 18 FROSTI and KOSMET enhanced with Simultaneous Left and Right
Truncation
NEWS 9 AUG 18 Simultaneous left and right truncation added to ANABSTR
NEWS 10 SEP 22 DIPPR file reloaded
NEWS 11 SEP 25 INPADOC: Legal Status data to be reloaded
NEWS 12 SEP 29 DISSABS now available on STN
NEWS 13 OCT 10 PCTFULL: Two new display fields added
NEWS 14 OCT 21 BIOSIS file reloaded and enhanced
NEWS 15 OCT 28 BIOSIS file segment of TOXCENTER reloaded and enhanced

NEWS EXPRESS NOVEMBER 14 CURRENT WINDOWS VERSION IS V6.01c, CURRENT
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
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FILE 'HOME' ENTERED AT 15:22:22 ON 17 NOV 2003

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

Patel

<11/18/2003>

FILE 'REGISTRY' ENTERED AT 15:22:35 ON 17 NOV 2003
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STRUCTURE FILE UPDATES: 16 NOV 2003 HIGHEST RN 617673-49-1
DICTIONARY FILE UPDATES: 16 NOV 2003 HIGHEST RN 617673-49-1

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

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PROPERTIES for more information. See STNote 27, Searching Properties
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<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>

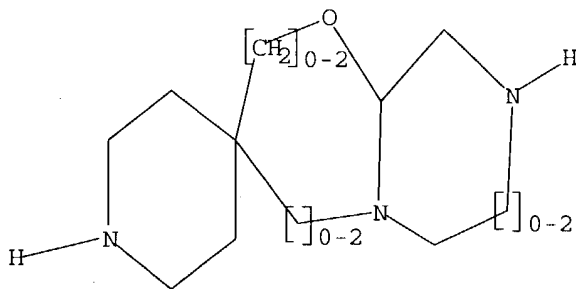
Uploading 10026606.2

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 15:22:59 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 79 TO ITERATE

100.0% PROCESSED 79 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 1047 TO 2113

Welcome to STN International! Enter x:x

LOGINID:sssptal611sxp

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 10 SEP 22 DIPPR file reloaded
NEWS 11 SEP 25 INPADOC: Legal Status data to be reloaded
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NEWS 13 OCT 10 PCTFULL: Two new display fields added
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NEWS 15 OCT 28 BIOSIS file segment of TOXCENTER reloaded and enhanced

NEWS EXPRESS NOVEMBER 14 CURRENT WINDOWS VERSION IS V6.01c, CURRENT
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
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FILE 'HOME' ENTERED AT 15:44:30 ON 17 NOV 2003

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

Patel

<11/18/2003>

FILE 'REGISTRY' ENTERED AT 15:44:44 ON 17 NOV 2003
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TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

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in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>

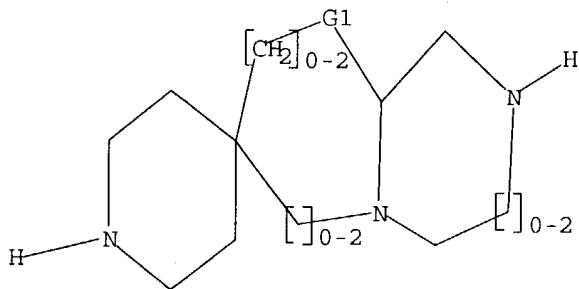
Uploading 10026606.3

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 O, S, SO2, NH

Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss full

STRUCTURE TOO LARGE - SEARCH ENDED

A structure in your query is too large. You may delete
attributes or atoms to reduce the size of the structure
and try again.

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

Patel

<11/18/2003>

10026606.2

Page 3

FULL ESTIMATED COST

ENTRY	SESSION
0.80	1.01

STN INTERNATIONAL LOGOFF AT 15:45:49 ON 17 NOV 2003

Welcome to STN International! Enter x:x

LOGINID:sssptal611sxp

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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 NEWS 9 AUG 18 Simultaneous left and right truncation added to ANABSTR
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FILE 'HOME' ENTERED AT 15:47:16 ON 17 NOV 2003

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

Patel

<11/18/2003>

FILE 'REGISTRY' ENTERED AT 15:47:25 ON 17 NOV 2003
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DICTIONARY FILE UPDATES: 16 NOV 2003 HIGHEST RN 617673-49-1

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

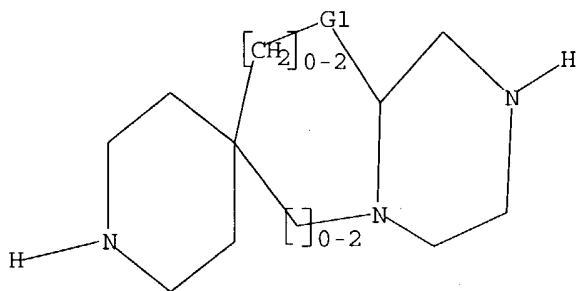
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
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<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>
Uploading 10026606.4

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



G1 O,S,SO2,NH

Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss full
FULL SEARCH INITIATED 15:47:50 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 91496 TO ITERATE

100.0% PROCESSED 91496 ITERATIONS
SEARCH TIME: 00.00.02

2 ANSWERS

L2 2 SEA SSS FUL L1

=> file marpat

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

148.15

148.36

FILE 'MARPAT' ENTERED AT 15:47:59 ON 17 NOV 2003

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FILE CONTENT: 1988-PRESENT (VOL 104 ISS 15-VOL 139 ISS20) (20031114ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US 6632961 14 OCT 2003

DE 10232663 16 OCT 2003

EP 1354869 22 OCT 2003

JP 2003300880 21 OCT 2003

WO 2003087212 23 OCT 2003

Structure search limits have been raised. See HELP SLIMIT for the new, higher limits.

=> s l1 sss full

FULL SEARCH INITIATED 15:48:07 FILE 'MARPAT'

FULL SCREEN SEARCH COMPLETED - 3809 TO ITERATE

48.0% PROCESSED	1828 ITERATIONS	0 ANSWERS
92.7% PROCESSED	3531 ITERATIONS	0 ANSWERS
98.6% PROCESSED	3756 ITERATIONS	0 ANSWERS
99.5% PROCESSED	3791 ITERATIONS (1 INCOMPLETE)	1 ANSWERS
100.0% PROCESSED	3809 ITERATIONS (1 INCOMPLETE)	1 ANSWERS

SEARCH TIME: 00.01.26

L3 1 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

105.35

253.71

FILE 'CAPLUS' ENTERED AT 15:49:48 ON 17 NOV 2003

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FILE COVERS 1907 - 17 Nov 2003 VOL 139 ISS 21
FILE LAST UPDATED: 16 Nov 2003 (20031116/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d his

(FILE 'HOME' ENTERED AT 15:47:16 ON 17 NOV 2003)

FILE 'REGISTRY' ENTERED AT 15:47:25 ON 17 NOV 2003

L1 STRUCTURE UPLOADED
L2 2 S L1 SSS FULL

FILE 'MARPAT' ENTERED AT 15:47:59 ON 17 NOV 2003

L3 1 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 15:49:48 ON 17 NOV 2003

=> s 12

L4 1 L2

=> s 13

L5 1 L3

=> s 14 and 15

L6 0 L4 AND L5

=> d 14 fbib hitstr abs total

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:31501 CAPLUS
DN 134:100887
TI Preparation of tricyclic compounds having spiro-piperidine as inhibitors
of blood coagulation factor X (FXa) and anticoagulants
IN Nishida, Hidemitsu; Saitoh, Fumihiko; Harada, Kousuke; Shiromizu, Ikuya
PA Mochida Pharmaceutical Co., Ltd., Japan
SO PCT Int. Appl., 305 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001002397	A1	20010111	WO 2000-JP4374	20000630
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

JP 1999-222883 A 19990630
EP 1191028 A1 20020327 EP 2000-940912 20000630
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

JP 1999-222883 A 19990630
WO 2000-JP4374 W 20000630
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JP 2000-399998 A 20001228
NO 2001006402 A 20020227 NO 2001-6402 20011228
JP 1999-222883 A 19990630
WO 2000-JP4374 W 20000630

PATENT FAMILY INFORMATION:

FAN 2002:521746

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002053568	A1	20020711	WO 2001-JP11656	20011228
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1346994	A1	20030924	EP 2001-272922	20011228
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
			JP 2000-399998 A	20001228
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			WO 2001-JP11656W	20011228

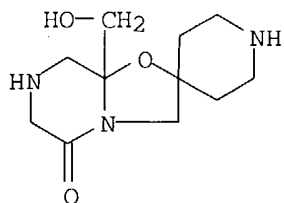
OS MARPAT 134:100887

IT **318988-48-6P**, 1,4-Diaza-6-(hydroxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonane-8,4'-piperidine]-2-one **318988-58-8P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of tricyclic compds. having spiro-piperidine as inhibitors of blood coagulation factor X (FXa) and anticoagulants or as pharmacophores in mol. designing Fxa inhibitors)

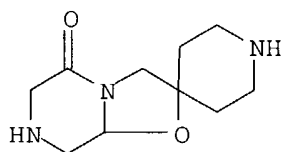
RN 318988-48-6 CAPLUS

CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro-8a-(hydroxymethyl)- (9CI) (CA INDEX NAME)

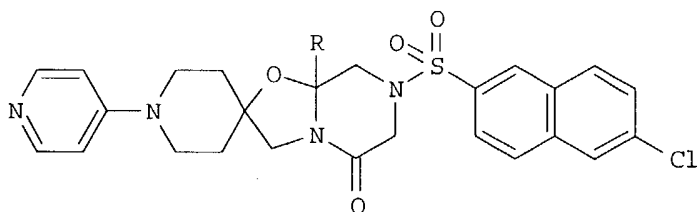
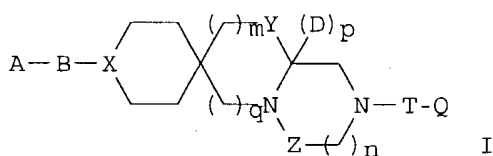


RN 318988-58-8 CAPLUS

CN Spiro[5H-oxazolo[3,2-a]pyrazine-2(3H),4'-piperidin]-5-one, tetrahydro-(9CI) (CA INDEX NAME)



GI



II

AB Arom. compds. having cyclic amino which are represented by general formula (I) or salts thereof [wherein A = H, (un)substituted (un)satd. 5- to 6-membered cyclic hydrocarbyl or heterocyclyl, (un)substituted NH₂, (un)substituted imidoyl; B = single bond, CO, SO, (un)substituted C1-2 alkylene; D = H, (un)substituted CHO, (un)substituted C1-6 alkyl; X = N, (un)substituted methine; Y = O, S(O)_y (wherein y = 0,1,2), (un)substituted NH; Z = CH₂, CO, C(S); T = S(O)_z (wherein z = 0,1,2), CO, (un)substituted C1-2 alkylene; Q = (un)substituted hydrocarbyl or heterocyclyl; m, n, q = 0, 1,2; p = 0,1; the three rings contg. X, Y, or Z is optionally substituted; the bond represented by a dotted and solid line in the ring contg. Z is a single bond or a double bond when p = 0] are prepd. These compds. are useful as drugs, in particular, activated blood coagulation factor X inhibitors for the prevention and treatment of diseases caused by thrombus or embolism, influenza virus infection, or periodontosis, exert a potent anticoagulation effect, and can be orally administered. A

pharmacophore derived from the above compds. is also useful in mol. designing Fxa inhibitors. Thus, 4-(aminomethyl)-1-benzyl-4-hydroxypiperidine was cyclocondensed with Et 2-[N-(3-acetoxy-2-oxopropan-1-yl)-N-(6-chloronaphthalene-2-ylsulfonyl)amino]acetate under reflux in the presence of p-MeC6H4SO3H.H2O using a Dean-Stark trap to give 6-acetoxy-1,4-diaza-1'-benzyl-4-(6-chloronaphthalene-2-ylsulfonyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one which underwent sapon. with a mixt. of aq. NaOH and MeOH, methylation by di-Me sulfate, and debenzylation with 1-chloroethyl chloroformate to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxaspiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one hydrochloride. The latter compd. was condensed with 4-chloropyridine hydrochloride in the presence of diisopropylethylamine in 2-ethoxyethanol under reflux for 2 h to give 1,4-diaza-4-(6-chloronaphthalene-2-ylsulfonyl)-6-(methoxymethyl)-7-oxo-1'-(4-pyridyl)-spiro[bicyclo[4.3.0]nonan-8,4'-piperidine]-2-one (II; R = CH2OMe). II (R = CH2OMe) and II (R = CO2Et) showed IC50 of 0.0032 and 0.0015 .mu.M, resp., against Fxa.

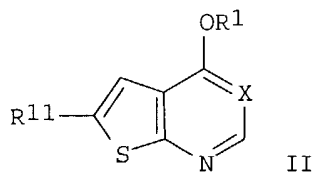
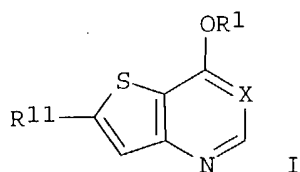
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:5724 CAPLUS
DN **138:73262**
TI Preparation of thienopyridines and thienopyrimidines as anticancer agents
IN Marx, Matthew A.; Luzzio, Michael J.; Autry, Christopher L.
PA Pfizer Inc., USA
SO PCT Int. Appl., 56 pp.
 CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003000194	A2	20030103	WO 2002-US19830	20020620
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				US 2001-299879PP	20010621

OS MARPAT 138:73262
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AB Title compds. [I, II; R1 = H, A, COA, (R5-substituted) Ar, het; A = alkyl; Het = heterocyclyl; Ar = aryl; R5 = halo, CN, NO2, OCF3, CF3, N3, COR8, CO2R8, O2CR8, OCO2R8, NR6COR7, NR6R7, OR9, SO2NR6R7, A, (CH2)tO(CH2)qOR9, (CH2)tOR9, S(O)jA, (CH2)tAr, (CH2)tHet, CO(CH2)tAr, (CH2)tO(CH2)jAr, (CH2)tO(CH2)qHet, CO(CH2)tHet, (CH2)jNR7(CH2)qNR6R7, (CH2)jNR7CH2C(O)NR6R7, (CH2)jNR7(CH2)tO(CH2)qOR9, (CH2)jNR7(CH2)qS(O)jA, (CH2)jNR7(CH2)tR6, SO2(CH2)tAr, SO2(CH2)tHet, etc.; j = 0-2; t = 0-6; q = 2-6; A, Ar, Het of R5 are optionally substituted by 1-3 halo, CN, NO2, CF3, N3, COR8, CO2R8, OCO2R8, NR6COR7, (CH2)tNR6R7, A, (CH2)tAr, (CH2)tHet, etc.; R6, R7 = H, A, (CH2)tAr, (CH2)tHet, (CH2)tO(CH2)qOR9, (CH2)tOR9; the A, Ar, Het of R6, R7 are optionally substituted by 1-3 halo, CN, NO2, CF3, N3, COR8, CO2R8, OCO2R8, NR9COR10, CONR9R10, NR9R10, A, (CH2)tAr, (CH2)tHet, (CH2)tOR9, etc.; R8 = H, A, (CH2)tAr, (CH2)tHet; t = 0-6; R9, R10 = H, Ar; R11 = H, A, CONR12R13, COAr, (CH2)tAr, (CH2)tHet, (CH2)tNR12R13, SO2NR12R13, CO2R12, A, COAr, (CH2)tAr, and (CH2)tHet are optionally substituted by 1-5 R5; R12, R13 = H, A, (CH2)t(cycloalkyl), (CH2)tAr, (CH2)tHet, (CH2)tO(CH2)qOR9, (CH2)tOR9, A, Ar, Het are optionally substituted by 1-3 R5; R12R13N = (R5-substituted) azabicyclic, aziridinyl, azetidiny, pyrrolidinyl, piperidinyl, piperazinyl, (thio)morpholinyl, (dihydro)isoquinolinyl], were prepd. (no data). Thus, Cs2CO3, (3R)-(7-chlorothieno[3,2-b]pyridin-2-yl)(3-methoxypyrrolidin-1-yl)methanone (prepn. given), and 2-methyl-1H-indol-5-ol (prepn. given) in DMF were heated at 90.degree. for 20 h to give (3R)-(3-methoxypyrrolidin-1-yl)[7-(2-methyl-1H-indol-5-yloxy)thieno[3,2-b]pyridin-2-yl]methanone.

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
13.82	267.53

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-1.30	-1.30

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